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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/363,013	07/29/99	SCHIEFEE	R 2920-223
		PM82/0301	<input type="text"/> EXAMINER
NIXON & VANDERHYE P C 1100 NORTH GLEBE ROAD 8TH FLOOR ARLINGTON VA 22201		SANCHEZ, G	<input type="text"/> ART UNIT <input type="text"/> PAPER NUMBER
		3641	10
		<b>DATE MAILED:</b>	03/01/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

<b>Offic Action Summary</b>	Application N .	Applicant(s)	
	09/363,013	SCHEFEE ET AL.	
	Examiner Glenda L. Sánchez	Art Unit 3641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

#### Status

- 1) Responsive to communication(s) filed on 29 July 1999.
- 2a) This action is FINAL.                  2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-14 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved.
- 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. § 119

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) All b) Some \* c) None of the CERTIFIED copies of the priority documents have been:
1. received.
2. received in Application No. (Series Code / Serial Number) \_\_\_\_\_.
3. received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

#### Attachment(s)

- |  |  |
|--|--|
| 14) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                             | 17) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s) _____   |
| 15) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                    | 18) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 16) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 19) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-12 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1, the multiple use of the term "comprising" renders the claim unclear as to whether the oxidizer is the solvent or the solute. Claim 11 recites the limitation "catalyst" in the monopropellant of claim 6. There is insufficient antecedent basis for this limitation in the claim.

Claim 10 provides for the use of propulsive power, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 10 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

A claim which is intended to embrace both product or machine and process is precluded by 35 USC 101, which sets forth statutory classes in alternative only, and also is invalid under 35 USC 112, second paragraph, since a claim which purports to be both product and process is ambiguous, Ex parte Lyell, 17USPQ2d 1548.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8, 10, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wagaman '136 in view of Weill et al. '988.

Wagaman '136 discloses liquid oxidizers for propellants comprising nitric acid, ammonium nitrate and water. Table 4 shows the ammonium nitrate-nitric acid oxidizers with ethanol (example 6). Weill et al. '988 teach a three component liquid monopropellant composition which comprises an amine salt, oxidant and water. Suitable oxidizers for the invention are "water soluble oxidants, such as hydrogen peroxide, ammonium nitrate, ammonium perchlorate, nitric acid, perchloric acid..." and mixtures thereof (col. 2, line 27-34).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the teaching of Weill et al. in the liquid

monopropellant composition of Wagaman and substitute hydrogen peroxide for the nitric acid as taught by Weill et al., in order to obtain a non-detonable liquid monopropellant.

Claims 9 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wagaman '136 in view of Weill et al. '988 as applied to claims 1-8, 10 and 14 above, and further in view of Langlet et al. '483.

Wagaman '136 discloses liquid oxidizers for propellants comprising nitric acid, ammonium nitrate and water. Table 4 shows the ammonium nitrate-nitric acid oxidizers with ethanol in example 6. Weill et al. '988 teach a three component liquid monopropellant composition which comprises an amine salt, oxidant and water. Suitable oxidizers for the invention are "water soluble oxidants, such as hydrogen peroxide, ammonium nitrate, ammonium perchlorate, nitric acid, perchloric acid..." and mixtures thereof (col. 2, line 27-34). Langlet et al. '483 teach the use of dinitramide salts as oxidizer in solid propellants (abstract and col. 1, line 25-30).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the teaching of Weill et al. and Langlet et al. in the liquid monopropellant composition of Wagaman and substitute hydrogen peroxide for the nitric acid as taught by Weill et al. and substitute solid ammonium dinitramide for the ammonium nitrate as taught by Langlet et al., in order to obtain a non-detonable liquid monopropellant.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Mueller et al. 'H1768 disclose storable liquid oxidizers. Inoue et al. '105, Clay '633 and Cooper et al. '433 disclose compositions where ammonium nitrate is suggested to be used as an oxidation agent, and, ethanol and methanol as a suitable solvent. Bouillet et al. '800 and Eckels '392 disclose explosive composition with hydrogen peroxide. Rusek et al. '837 and Wernimont et al. '368 disclose systems which use hydrogen peroxide, which is decomposed with a silver screen catalytic bed. Dillehay et al. '150 discloses ammonium dinitramide as a suitable oxidizer in a pyrotechnic composition and different alcohols as solvents.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Glenda L. Sánchez whose telephone number is (703) 306-4164. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles T. Jordan can be reached on (703) 306-4159. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-0285 for regular communications.

Any inquiry of a general nature or relating to the status of this application  
or proceeding should be directed to the receptionist whose telephone number is  
(703) 308-1113.

*Charles T. Jordan*

Charles T. Jordan  
Supervisory Patent Examiner  
Group 3600

GLS  
February 28, 2000